IN THE CLAIMS:

1. (currently amended) A method of communicating data in a cellular telecommunication network (3) in which the available capacity is not uniformly distributed, comprising the steps of:

tracking (S1) the locations of a mobile station (1) moving in [[the]] a cellular telecommunication network in which the available capacity is not uniformly distributed (3), where a communication has been established between the mobile station and the cellular telecommunication network; and

scheduling (S4) the data communication to or from the mobile station (1) in accordance with the available capacity of the network at both the current location and future locations of the mobile station,

wherein the data communication to or from the mobile station at the current location of the mobile station is prioritized in theduring scheduling step when the available capacity at future locations is less than that at the current location, by giving traffic to or from the mobile station a priority while the mobile station is still in a less congested area of the cellular telecommunication network, and

wherein the data communication to or from the mobile station at the current location of the mobile station is delayed in theduring scheduling step when the available capacity at future locations is higher than that at the current location.

2. (currently amended) The method according to claim 1, further comprising the further step of:

estimating (S12) the future locations of the mobile station on the basis of the locations tracked in theduring tracking step (S1).

3. (currently amended) The method according to claim 1, further comprising the further step of:

estimating (S12) the future locations of the mobile station on the basis of route information about the moving mobile station provided by the mobile station.

4. (currently amended) The method according to claim 1, further comprising ~~the further step of~~:

estimating ~~(S12)~~ the future locations of the mobile station on the basis of movement patterns of the mobile station.

5. (currently amended) The method according to claim 1, further comprising ~~the further step of~~:

estimating ~~(S13)~~ the available capacity of the network at the current and future locations of the mobile station on the basis of an estimated current and future traffic load distribution of the network in [[the]] an area in which and towards the mobile station is moving.

6. (original) The method according to claim 5, wherein the area comprises cells, groups of cells, geographical areas and network nodes.

7. (currently amended) The method according to claim 1, further comprising ~~the further step of~~:

estimating ~~(S3)~~ the data communication needs of the mobile station.

8. (currently amended) The method according to claim 7, wherein the data communication to or from the mobile station is prioritized ~~in the~~ during scheduling ~~step~~ when the data communication needs exceed a specific amount of data to be communicated.

9. (original) The method according to claim 5, wherein the mobile station executes measurements of the traffic load distribution in the area and along the path in which it is moving, and wherein the available capacity of the current and future locations of the mobile station is estimated on the basis of the measurement results.

10. (currently amended) The method according to claim 7, further comprising ~~the further step of~~:

buffering data transmitted to and from the mobile station (1), wherein the estimation of the data communication needs of the mobile station (1) is performed by monitoring the amount of buffered data.

11. (original) The method according to claim 7, wherein the data communication needs of the mobile station are estimated on the basis of a transmission request from the mobile station.

12. (original) The method according to claim 9, wherein the mobile station executes the measurements according to traffic load distribution information received from the network.

13. (original) The method according to claim 1, wherein a plurality of mobile stations each having data communication needs are present in the network, and wherein the data communications of the plurality of mobile stations are scheduled in accordance with the available capacity of the network.

14. (original) The method according to claim 13, wherein the data communications of the plurality of mobile stations are scheduled in accordance with estimated data communication needs of these mobile stations.

15. (currently amended) A telecommunication system for communicating data in a cellular telecommunication network (3) in which the available capacity is not uniformly distributedAn apparatus, comprising:

control means (2)a controller communicating with a mobile station (1) and the cellular telecommunication network (3), where a communication has been established between the mobile station and the cellular telecommunication network for tracking the locations of [[the]] a mobile station (1) moving in [[the]] a cellular telecommunication network (3) where a communication has been established between the mobile station and the cellular telecommunication network, and for scheduling the data communication to or from the mobile station in accordance with the available capacity of the network at both the current location and future locations of the mobile station,

wherein the data communication to or from the mobile station at the current location of the mobile station is prioritized by the ~~control means~~controller when the available capacity at future locations is less than that at the current location, by giving traffic to or from the mobile station a priority while the mobile station is still in a less congested area of the cellular telecommunication network, and

wherein the data communication to or from the mobile station at the current location of the mobile station is delayed by the ~~control means~~controller when the available capacity at future locations is higher than that at the current location.

16. (currently amended) The ~~system~~apparatus according to claim 15, wherein the ~~control means~~controller is configured to estimate the future locations of the mobile station on the basis of the tracked locations.

17. (currently amended) The ~~system~~apparatus according to claim 15, wherein the ~~control means~~controller is configured to estimate the future locations of the mobile station on the basis of route information about the moving mobile station provided by the mobile station.

18. (currently amended) The ~~system~~apparatus according to claim 15, wherein the ~~control means~~controller is configured to estimate the future locations of the mobile station on the basis of movement patterns of the mobile station.

19. (currently amended) The ~~system~~apparatus according to claim 15, wherein the ~~control means~~controller is configured to estimate the available capacity of the network at the current and future locations of the mobile station on the basis of an estimated current and future traffic load distribution of the network in the area in which and towards the mobile station is moving.

20. (currently amended) The ~~system~~apparatus according to claim 19, wherein the area comprises cells, groups of cells, geographical areas and network nodes.

21. (currently amended) The ~~system~~apparatus according to claim 15, wherein the ~~control means~~controller is configured to estimate the data communication needs of the mobile station.

22. (currently amended) The ~~system~~apparatus according to claim 21, wherein the data communication to or from the mobile station is prioritized by the ~~control means~~controller when the data communication needs exceed a specific amount of data to be communicated.

23. (currently amended) The ~~system~~apparatus according to claim 19, wherein the mobile station executes measurements of the traffic load distribution in the area and along the path in which it is moving, and wherein the ~~control means~~controller is configured to estimate the available capacity of the current and future locations of the mobile station on the basis of the measurement results transmitted from the mobile station to the ~~control means~~controller.

24. (currently amended) The ~~system~~apparatus according to claim 21, wherein the ~~control means~~controller is configured to monitor buffers for buffering data transmitted to and from the mobile station ~~(1)~~, and estimate the data communication needs of the mobile station ~~(1)~~ on the basis of the monitored amount of buffered data.

25. (currently amended) The ~~system~~apparatus according to claim 21, wherein the ~~control means~~controller is configured to estimate the data communication needs of the mobile station on the basis of a transmission request from the mobile station.

26. (currently amended) The ~~system~~apparatus according to claim 23, wherein the mobile station executes the measurements according to traffic load distribution information received from the network.

27. (currently amended) The ~~system~~apparatus according to claim 15, wherein a plurality of mobile stations each having data communication needs are present in the network, and wherein the data communications of the plurality of mobile stations are scheduled in accordance with the available capacity of the network.

28. (currently amended) The ~~system~~apparatus according to claim 27, wherein the data communications of the plurality of mobile stations are scheduled in accordance with estimated data communication needs of these mobile stations.

29. (new) An apparatus, comprising:

means for tracking the locations of a mobile station moving in a cellular telecommunication network where a communication has been established between the mobile station and the cellular telecommunication network, and for scheduling data communication to or from the mobile station in accordance with the available capacity of the network at both the current location and future locations of the mobile station,

wherein the data communication to or from the mobile station at the current location of the mobile station is prioritized by the means for tracking and for scheduling when the available capacity at future locations is less than that at the current location, by giving traffic to or from the mobile station a priority while the mobile station is still in a less congested area of the cellular telecommunication network, and

wherein the data communication to or from the mobile station at the current location of the mobile station is delayed by the means for tracking and for scheduling when the available capacity at future locations is higher than that at the current location.

30. (new) The apparatus according to claim 29, wherein the means for tracking and for scheduling are for estimating the future locations of the mobile station on the basis of the tracked locations.

31. (new) A system, comprising:

control means for communicating with a mobile station and a cellular telecommunications network, for tracking the locations of the mobile station moving in the cellular telecommunications network where a communication has been established between the mobile station and the cellular telecommunication network, and for scheduling data communication to or from the mobile station in accordance with the available capacity of the network at both the current location and future locations of the mobile station;

wherein the data communication to or from the mobile station at the current location of the mobile station is prioritized by the control means when the available capacity at future locations is less than at the current location, by giving traffic to or from the mobile station a priority when the mobile station is still in a less congested area of the cellular telecommunication network; and

wherein the data communication to or from the mobile station at the current location of the mobile station is delayed by the control means when the available capacity at future locations is higher than that at the current location.